



## Request for Proposal 2021-001 Water & Wastewater Master Plan

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### I. INTRODUCTION

The City of Paola, Kansas is announcing a request for proposal (RFP) for an engineering consultant to develop master plans for its water and wastewater utilities. Recommendations from this project will be utilized to develop a 10-year capital improvement plan and budget for each utility. The City has a preliminary budget of \$125,000 for this project. The Scope of Services is presented in the following sections.

### II. WATER MASTER PLAN

The Engineer shall prepare a hydraulic model of the City's existing water distribution system that will be utilized to prepare a water distribution system review and assessment. The City has approximately 2,400 connections. The assessment will include project recommendations and cost estimates for inclusion into the City's 10-year capital improvement plan and budget. The following tasks are anticipated:

#### a. Water Use Summary

The Engineer will prepare a summary of the historical water usage for the past five consecutive years. Historical water usage data correlated with weather will be summarized to identify annual average demands, maximum day demands, and peak flow demands for the water distribution system. The Engineer will also determine the recommended fire flow demands that should be incorporated into the water model for residential, commercial, and industrial areas. The latest batch report from the Insurance Services Offices of Kansas will be used to assign site-specific fire flow demands.

#### b. Water System Hydraulic Model

The Engineer will develop a computer hydraulic model of Paola's existing water distribution system based on current demands, connections, and population. The City's GIS information can be used as the basis of the water model. Pipe material, diameter, and age shall be verified by the consultant with City staff, reviewing the construction record drawings and developer plats. Prior to developing the model, the Engineer will discuss the pros and cons of the various water modeling software programs available. The model will be developed to enable future use by the City for analysis and updating after project completion. The model should be versatile and

adaptable as well as transferable to different modeling frameworks. Model calibration is expected with a combination of fire hydrant testing and pressure recorders. City staff can assist with the field activities.

c. System Condition and Improvement Analysis

Utilizing the water model developed in the preceding task, the Engineer will review the available water flow and pressures within the distribution system for the following scenarios:

- i. Average Daily Demand
- ii. Maximum Daily Demand
- iii. Peak Hour Demand
- iv. Maximum Daily Demand plus Fire Flow

City staff can provide a history of water main breaks and water main replacements. Based on the historical water main break information and the calibrated water model, the Engineer will evaluate the modeling results for the demand scenarios identified above and develop a list of improvements and water main replacements necessary to meet the water demand scenarios. The potential recommendations should include consideration of line replacements, SCADA and controls improvements, storage and pumping considerations, disinfection and water age issues, among others.

d. Cost Estimate and 10-Year Prioritized Project List

The Engineer will develop preliminary construction cost estimates for the identified water distribution improvements. Upon consultation with the City, these projects will then be prioritized for incorporation into a 10-year capital improvement program.

### III. **WASTEWATER MASTER PLAN**

The Engineer shall prepare a computer hydraulic model of the City's existing sewer collection system that will be utilized to prepare a collection system review and assessment. The City has initiated a sewer relining program and the capacity of the existing mains to handle existing flows will be evaluated. The assessment will include project recommendations and cost estimates for inclusion into the City's 10-year capital improvement plan and budget. The following tasks are anticipated:

a. Sewer Flow and Population Summary

The Engineer will evaluate winter and summer water demands, inflows into the wastewater treatment plant, historical and current population estimates, and land use to determine the estimated wastewater unit flows for each residential, commercial, and industrial connection.

b. Sewer System Hydraulic Model

The Engineer will develop a computer hydraulic model of Paola's existing wastewater collection system based on the City's GIS database. The City has eight (8) lift stations for inclusion into the sewer model. Pump curves, pipe material, diameter, and age shall be verified by the consultant with City staff, reviewing available construction record drawings and developer plats. Prior to developing the model, the Engineer will discuss the pros and cons of the various sewer modeling software programs available. The model will be developed to enable future use by the City for analysis and updating after project completion. The model should be versatile and adaptable as well as transferable to different modeling frameworks.

Available wastewater treatment plant inflows and lift station run time data can be utilized to calibrate the sewer model. City staff can assist with the field activities to field verify pump run times, sewer main materials, diameters, and invert elevations.

c. System Condition and Improvement Analysis

Utilizing the sewer model developed in the preceding task, the Engineer will review the available sewer capacity for the following scenarios:

- i. Average Daily Flow
- ii. Maximum Daily Flow
- iii. Peak Hour Flow

The master plan will also include an analysis of wet-weather flow impacts and inflow/infiltration based on existing data and information from the City. Based on the historical sewer main break information, surcharges, and the calibrated sewer model, the Engineer will evaluate the modeling results for the demand scenarios identified above and develop a list of improvements and sewer main replacements necessary to meet the demand scenarios. For each scenario, the Engineer will prepare collection system maps and an accompanying Excel spreadsheet of the individual sewer main sections and associated sewer capacity. The Engineer will also evaluate and determine if the current pumping capacity and wet well volume of the lift stations is adequate to satisfy existing flows without producing excessive odors. The potential recommendations should include consideration of line rehabilitation or replacements, SCADA and controls improvements, lift station consolidation, and odor control issues, among others.

d. Wastewater Treatment Facility Plan

The City of Paola currently operates a Schreiber-style wastewater treatment plant. The plant began operation in 2006 and is rated for an average daily flow of 0.83 MGD. The plant is rated for an Averaged Daily Flow of 1.4 MGD and a Peak Flow of 4.2 MG. The Engineer will develop a facility plan for the wastewater treatment plant to meet current and anticipated future wastewater quality regulations and treatment objectives. The review will include historical influent and effluent water quality data at the treatment plant. The Engineer should consult with the Kansas Department of Health and Environment in regard to current and future water quality limits that may be expected in the receiving water, and should review potential options and recommendations with the City.

e. Cost Estimate and 10-Year Prioritized Project List

The Engineer will develop preliminary construction cost estimates for the identified sewer collections and wastewater treatment plant improvements. Upon consultation with the City, these projects will then be prioritized for incorporation into a 10-year capital improvement program.

#### **IV. DEVELOPMENT OF SCOPE OF SERVICES**

Following the selection of the successful firm, a detailed Scope of Services will be developed by the City and consultant to outline the specific purposes, objectives, and tasks of the master plan projects.

#### **V. PROPOSAL PROCEDURES**

a. Anticipated Proposal Schedule

The following is a timetable for the consultant selection process.

<b>Date</b>	<b>Activity</b>
March 26, 2021	Advertise Request for Proposals
April 21, 2021	Consultant proposals due
May 11, 2021	Approval by Paola City Council

b. Inquiries Regarding the RFP

Questions concerning the RFP may be directed via email to:

Sid Fleming – [sfleming@paolagov.org](mailto:sfleming@paolagov.org)

### c. Submission of Proposals

Proposers shall submit four copies of their proposal. An electronic PDF version of the proposal shall be provided on a thumb drive or equivalent with the submission of the hard copies of the proposal.

Proposals for the Water & Wastewater Master Plan Project will be received at:

Paola City Hall  
19 E Peoria St.  
Paola, KS 66071

until 12:00 PM (Local Time) on April 21, 2021. Proposals received after the submission deadline will not be considered. Proposals should be clearly marked by the proposer and should be addressed to:

#### **Paola Water & Wastewater Master Plan Project**

**Attn: Sid Fleming, City Manager**

### d. Evaluation and Award Criteria

A Staff Screening and Selection Committee will review the Proposals and develop a ranking list based on the criteria stated below. After the initial screening process, the committee may also conduct interviews with selected firms, providing an opportunity for further clarification of the selected proposals. After this review process, the City Manager will present a recommendation to the City Council for consideration.

#### i. Criteria

1. Project Approach – Adequacy of the proposal addressing the areas of focus to include project timeline and implementation capacity.
2. Fees for Services – Provide the fee for the proposed services and the fee rate for any related services.
3. Technical Qualifications – The qualifications of the firm’s professional personnel to be assigned to the engagement and the qualifications of the firm’s management support personnel to be available for technical consultation.

4. Firm Experience – Consultant’s past experience and demonstrated success with similar master planning projects; and the ability to provide the necessary professional staff, on a timely basis to complete the study.

e. Terms and Conditions

- i. This RFP does not commit the City of Paola to award a contract, to defray any costs incurred in the preparation of a response to this request, or to procure or contract for services.
- ii. The City of Paola reserves the right to extend the date by which the submittals are due.
- iii. The City of Paola reserves the right to cancel, in part or in its entirety, this RFP including but not limited to: selection schedule, submittal date, and submittal requirements. If the City of Paola cancels or revises the RFP, such action shall be published as an addendum to the RFP.
- iv. All submittals become the property of the City of Paola. Except for the name of firms on the final list, no information contained in a proposal submittals shall be made public until after the award and execution of a contract.
- v. The City of Paola reserves the right to consider the requested options as a whole, in part, or not at all when determining the best product that best serves the City of Paola’s interest.
- vi. The City of Paola reserves the right to request additional information and/or clarifications from any or all Respondents to this RFP.
- vii. All proposals must remain in effect for 90 days after the proposal due date.
- viii. The City of Paola is an equal opportunity employer. Minority and women’s business enterprises are encouraged to submit proposals on the Project.

## **VI. PROPOSAL REQUIREMENTS**

- a. Cover Letter – A signed transmittal letter briefly stating the proposer’s understanding of the work to be done, why the firm believes itself to be the best qualified to perform the engagement, and any other information they consider essential to their proposal.
- b. Project Approach – The proposal should set forth a general project plan, including an explanation of the methodology to be followed to perform the services required in the request for proposal. Each proposal should detail the strategies to be taken to develop an understanding of Paola’s Water and Wastewater Utilities
- c. Firm Profile – At a minimum, the proposal should state the size of the firm, the size of the firm’s governmental planning staff, and the location of the office from which the work on this engagement will be performed.
- d. Project Team Qualifications – The proposal should describe the qualifications of staff to be assigned to the project. The description should include the composition of the team and prior experience of the individual team members.
- e. Proposed Fees – Provide the firm’s all-inclusive maximum fee for the requested work in this proposal. The fee rate for related services should also be included.
- f. Anticipated Project Schedule – The proposal should include a general timeline for the project.
- g. Work Samples & References – The proposal should describe prior water and wastewater master planning experience. The experience listing should be limited to the last five years and should include prior experience with Paola-like municipalities.

The proposal should include a maximum of three (3) client references, including contact persons and telephone numbers.